Designing along with the analysis of a cyclone dust collector using 3dexperience

MUKUNDJEE PANDEY*
Mechanical Engineering Department
Centurion University of Technology and Management, Odisha, India
[*For Correspondence: E-mail: mukundjee.pandey@cutm.ac.in]

B. PAVAN KALYAN[1], SAI KIRAN KUMAR PANDA[2], ROHIT KUMAR[3]
Bachelorof Technology, Mechanical Engineering
Centurion University of Technology and Management, Odisha, India

ABSTRACT

Dust collector or the cyclone dust collector is the device which is very popularly used to separate the dust particles from the air or the gas and to deliver the best quality of air i.e. which hits our aspirations. The most relevant application of this air filtration device is used in the Industries. At first, the air which the Industry is wishing to dump into the atmosphere is passed through the dust collector, the air enters into the processing chamber through the inlet opening then it gets introduced to the whole air filtration process in which the dust particles start making their way to the bottom most section of the collector. This collector is made up of disposable materials. So that there should be no harmful effect it on nature as well as our surrounding this is our understanding from this collector.

KEYWORDS: Cyclone dust collector, Velocity distribution, Efficiency of collection, filtration index.

INTRODUCTION

The most common as well as widely used remedies for air pollution and gas-solid separation is the Gas cyclone separating technique. The device which uses this technique is called a cyclone dust collector. The most important condition for making this device is that the resultant product should be able to resist the harsh and tough conditions in the commercial sector. The performance of the collector generally works

ISSN: 2395-6216